

Having settled these details, Eiffel established several forms of hygrometer and carried out comparative observations, from which he concludes that the Lambrecht polymeter and thermohygroscope as well as Lambrecht's weather telegraph with rules based on the observed temperature, pressure, moisture, and wind, give prognostics that are generally exact. American observers in a much drier climate have not reported so favorably.

The remaining chapters of this volume are devoted to the rain, clearness of the sky, the wind, and the barometer, followed by appendices giving tabular summaries of the observations from 1879 to 1903. A separate volume of diagrams and charts accompanies the text.

#### METHODS OF TEACHING METEOROLOGY.

Numerous requests are received from those giving limited courses of instruction, both Weather Bureau officials and non-official teachers, asking for sets of lantern slides to illustrate lectures; card indexes to current literature; and various publications bearing on meteorology with the idea that all these will help to keep the instructor informed as to the latest discoveries and will also enable him to give popular public lectures.

It seems to the Editor that the instruction in meteorology given in most of our schools and colleges needs to be of a fundamental, solid, character, and not of the popular superficial character appropriate to lectures that are illustrated by lantern slides. The study of the subject as expounded in the textbooks of Davis, Waldo, Ward, Hann, and others implies considerable intense thought. Laboratory experiments will often be very useful in elucidating the subjects of moisture, rainbows, halos, waterspouts and tornadoes; carefully drawn charts elucidate hurricanes; actual work with thermometers and perhaps with kites will interest every student in the distribution of temperature in the atmosphere; but a lecture with stereopticon illustrations should only come in as a sort of luxury once or twice during the course. It is really not at all essential. It is especially important for the teacher himself to be so interested in his subject as to devise his own diagrams and apparatus, at least some of them. Almost anyone can make a crude nephoscope out of a bit of mirror, or the cover of a tin pail turned over and filled with water. It is not necessary to buy a \$50 barometer in order to explain or observe the variations of atmospheric pressure. It is only after one has taught in his own original way for several years that he begins to realize the power of his own ingenuity and finds that he is doing better with crude material than many another man is doing with an elaborate equipment. If the educational apparatus that he devises is copied, manufactured, and sold to other teachers by some enterprising, money-making firm, that simply proves that some are intellectually sluggish and do not push their own school work on the independent, original basis that he himself does. There is no reason why the Weather Bureau officials should not take the lead in devising the best methods of teaching meteorology and climatology.

#### THE RAINFALL OF MEXICO.

The Annals of the Association of Engineers and Architects of Mexico has published in its twelfth volume, among many other interesting papers on engineering, one by Romulo Escobar, on the "Regimen of the Rainfall of Mexico." He gives in detail all accessible special items relative to the measurements of rainfall for a large number of stations. What particularly interests us is the comparative table from which we have made the following abstract showing the average rainfall for each successive lustrum. In place of taking an indiscriminate average of many years at one station and a few years at another we are able now to compare the simultaneous rainfalls

at different places, and indeed if there were only stations enough, or if Mexico had not such a very irregular orography, one might be able to reduce the whole system of measurements to one uniform fundamental period of standard lustra, such as, for instance, as 1881-1900, inclusive. Among his general conclusions, Escobar calls attention to the fact that most stations show a steady diminution for a long period of years, but that this has already begun to be followed by an increase. A similar diminution has been observed in our Gulf States from Texas to Alabama and Tennessee, but perhaps the subsequent increase that may be expected has not been everywhere observed owing to the frequent changes in our rain gages and their exposures.

*Average annual rainfall, by lustra, with number of years of record. Amounts in millimeters.*

Stations.	Before 1877.	1877-1881.	1882-1886.	1887-1891.	1892-1896.	1897-1901.
Hacienda el Carmen.....						5 684.8
Querétaro.....		5 623.8	5 518.3	5 486.4	5 386.1	5 430.8
Zapotlán.....					3 805.0	5 977.5
Linares.....					1 796.0	5 844.6
Aguascalientes.....		1 418.4	5 607.1	1 542.2		
Guanajuato.....		1 893.5	5 818.9	5 721.7	5 526.5	4 680.0
Jalapa.....					3 1334.3	4 1657.9
Morelia.....			1 648.8		3 661.5	5 703.7
Oaxaca.....		3 715.3	4 716.7	5 943.5	5 804.9	2 862.2
Tepic.....	19 1433.7		2 2301.7	5 1435.1	3 1334.3	
San Luis Potosí.....		4 403.9	5 363.2	5 426.2	5 284.6	4 303.8
Huejutla.....			5 1175.1	3 1538.1		
Pabellón.....		5 515.6	5 499.9	4 581.6		
Tacubaya.....			3 555.0	5 773.4	5 533.8	4 660.5
Real del Monte.....				3 873.0	5 606.1	4 835.3
Teziutlán.....		3 1716.8	2 1251.9	1 2268.2		
Tuxpan.....		2 1549.0	3 1197.1	3 1584.7		
Merida.....				2 887.5	5 801.9	5 924.5
Monterrey.....			2 422.2	5 335.2	5 398.2	5 712.9
Mazatlán.....		2 1201.4	5 842.7	5 758.7	5 669.2	5 794.4
Colima.....		4 1045.5		1 1233.0	5 821.0	4 1000.9
Pachuca.....					4 253.9	5 2254.4
Puebla, Col. Católico.....		5 1144.9	5 1258.2	5 1373.1	5 988.4	5 893.3
Puebla, Col. del Estado.....		4 963.4	5 860.3	5 969.4	5 821.5	5 810.9
México.....	15 671.3	5 566.2	5 589.0	5 651.4	5 471.1	5 577.9
Toluca.....			2 678.0		5 671.7	5 681.0
León.....		4 691.5	5 745.1	5 743.2	5 504.0	5 565.9
Saltillo.....			5 500.0	5 597.7	5 641.9	5 441.5
Guadalajara.....	3 810.3	5 941.5	5 829.9	5 992.0	5 1487.5	4 1493.1
Zacatecas.....		4 655.5	5 898.2	5 811.6	5 302.0	5 593.6
Galveston, Tex.....		4 1219.5	5 1269.6	4 1159.1	5 830.4	4 1159.9
El Paso, Tex.....		3 331.6	5 278.7	4 164.2	5 205.3	4 214.7
Yuma, Ariz.....		4 50.1	5 91.7	1 90.2	5 68.8	4 50.3

#### TEMPERATURES ON MOUNT ROSE, NEV.

Prof. J. E. Church of the University of Nevada at Reno, Nev., has made an effort to obtain a record of temperatures on the summit of Mount Rose, whose elevation is approximately 10,800 feet, latitude 39° 20' north, longitude 119° 55' west. Maximum and minimum thermometers were established in a small thermometer shelter at the summit toward the end of June and will be visited and reset as often as practicable. The record for the first three months is as follows: